LISTING OF CLAIMS

1. (currently amended) A compound selected from those of formula (I):

$$R-A-R'$$
 (I)

5 wherein:

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♦ A represents:

- a ring system of formula (II):

$$\begin{array}{c|c}
\hline
B & Z \\
\hline
X & Y & (II)
\end{array}$$

wherein • X represents oxygen, sulphur or nitrogen or C(H)q (wherein q is 0, 1 or 2) or NR0

- (wherein R₀-represents hydrogen, linear or branched (C₁-C₆)alkyl, aryl, aryl-
- (C₁-C₆)alkyl in which the alkyl moiety is linear or branched) or SO₂Ph,
- Y represents nitrogen or C(H)_q (wherein q is 0, 1 or 2),
- Z represents nitrogen or C(H)_e (wherein q is 0, 1 or 2),

but X, Y and Z cannot represent three hetero atoms simultaneously,

- B represents benzene or pyridine,
- the symbol means that the bonds may be single or double, it being understood that the valency of the atoms is respected,

wherein R substitutes the ring B and R' substitutes the ring containing X, Y and Z, or R and R' substitute the ring B,

20 - a ring system of formula (III):

wherein • X' represents oxygen or sulphur or C(H)q (wherein q is 0, 1 or 2),

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- Y' represents C(H)_q (wherein q is 0, 1 or 2) or NR₀ wherein R₀ is as defined hereinbefore,
- Z' represents C(H)_q (wherein q is 0, 1 or 2) or NR₀ wherein R₀ is as defined hereinbefore,
- T' represents oxygen or sulphur or C(H)_q (wherein q is 0, 1 or 2),

it being understood that, when Y' or Z' represents a hetero atom, the other three variables ((X', Z', T') and (X', Y', T'), respectively) cannot represent a hetero atom,

- the symbol is as defined hereinbefore, means that the bonds may be single or double, it being understood that the valency of the atoms is respected.
 - B' represents : * benzene,
 - * naphthalene when X', Y', Z' and T' do not simultaneously represent C(H)_q (wherein q is 0, 1 or 2),
 - * or pyridine when X' and T' simultaneously represent C(H)_q (wherein q is 0, 1 or 2),

wherein R substitutes the ring B' and R' substitutes the ring containing X', Y', Z' and T', or R and R' substitute the ring B',

- a ring system of formula (IV):

selected from the ring systems (IV_{a-d}):

$$(IV_a) \qquad (IV_b) \qquad (IV_c) \qquad (IV_d)$$

wherein • n is an integer such that $0 \le n \le 3$,

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- W represents oxygen, sulphur or nitrogen, or [C(H)_q]_p (wherein q is 0, 1 or 2, and p is 1 or 2) or NR₀ wherein R₀ is as defined hereinbefore,
- the symbol is as defined hereinbefore,

or biphenyl wherein R substitutes one of the benzene rings and R' substitutes the other, or R and R' substitute the same benzene ring,

it being understood that the ring system[[s]] of formula[[e]] (III), (III) and (IV) and the biphenyl group may be unsubstituted or substituted (in addition to the substituents R and R') by from 1 to 6 radicals, which may be the same or different, selected from R_a, OR_a, COOR_a, COOR_a, OCOR_a, OSO₂CF₃, cyano, nitro and halogen,

wherein R_a represents hydrogen, unsubstituted or substituted linear or branched (C₁-C₆)alkyl, unsubstituted or substituted linear or branched (C₂-C₆)alkenyl, unsubstituted or substituted linear or branched (C2-C6)alkynyl, linear or branched (C1-C6)polyhaloalkyl, unsubstituted (C₃-C₈)cycloalkyl, substituted unsubstituted substituted or (C₃-C₈)cycloalkyl-(C₁-C₆)alkyl in which the alkyl group is linear or branched, (C₃-C₈)cycloalkenyl, unsubstituted substituted unsubstituted substituted or (C3-C8)cycloalkenyl-(C1-C6)alkyl in which the alkyl group is linear or branched, aryl, aryl- (C_1-C_6) alkyl in which the alkyl moiety is linear or branched, aryl- (C_1-C_6) alkenyl in which the alkenyl moiety is linear or branched, heteroaryl, heteroaryl-(C₁-C₆)alkyl in which the alkyl moiety is linear or branched, heteroaryl-(C₁-C₆)alkenyl in which the alkenyl moiety is

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linear or branched, unsubstituted or substituted linear or branched (C₁-C₆)heterocycloalkyl, unsubstituted or substituted heterocycloalkenyl, substituted or unsubstituted heterocycloalkyl-(C₁-C₆)alkyl in which the alkyl moiety is linear or branched, or substituted or unsubstituted heterocycloalkenyl-(C₁-C₆)alkyl in which the alkyl moiety is linear or branched,

♦ R represents:

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- a group of formula (V):

$$\begin{array}{ccc}
-S - R^1 \\
| & (V) \\
(O)_r
\end{array}$$

wherein • r is an integer such that $0 \le r \le 2$,

• R¹ represents halogen, R_a, OR_a, COR_a or COOR_a, wherein R_a is as defined hereinbefore,

it being understood that R cannot represent SO₃H,

- -NR'aR"a wherein R'a and R"a, which may be the same or different, may take any of the values of Ra and also may form, together with the nitrogen atom carrying them, a 5- to 10-membered cyclic group which may contain, in addition to the nitrogen atom, from one to three hetero atoms selected from oxygen, sulphur and nitrogen,
- or, when A represents a ring system of formula (II) or (III) or a biphenyl group, forms, together with two adjacent carbon atoms of the cyclic structure A carrying it,

a ring of formula (VI):

wherein r and R_a are as defined hereinbefore,

the ring formed containing from 5 to 7 atoms and it being possible for the said ring to contain from 1 to 3 hetero atoms selected from nitrogen, sulphur and oxygen, and one or more unsaturations, and being optionally substituted by one or more radicals, which may be the same or different, selected from R_a, OR_a, COR_a, COR_a, OCOR_a, NR'_aR"_a, NR_aCOR'_a, CONR'_aR"_a, eyano, oxo, SR_a, S(O)R_a, SO₂R_a, CSR_a, NR_aCSR'_a, CSNR'_aR"_a, NR_aCONR'_aR"_a, NR_aCONR'_aR"_a, NR_aCONR'_aR"_a, and halogen,

wherein R_a, R'_a and R"_a, which may be the same or different, may take any of the values of R_a, and R'_a and R'_a may also form, together with the nitrogen atom carrying them, a cyclic group as defined hereinbefore,

♦ and R' represents a group of formula (VII) :

$$-G-R^2$$
 (VII)

wherein • G represents an alkylene chain -(CH₂)_t- (wherein t is an integer such that 0 ≤ t ≤ 4), optionally substituted by one or more radicals, which may be the same or different, selected from R_a, OR_a, COOR_a, COR_a (wherein R_a is as defined hereinbefore) and halogen,

are as defined hereinbefore, it being possible for R'_a and R"_a to form, together with the nitrogen atom carrying them, a cyclic group as defined hereinbefore,

it being understood that:

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- "heterocycloalkyl" is taken to mean any saturated mono- or poly-cyclic group containing

from 5 to 10 atoms containing from 1 to 3 hetero atoms selected from nitrogen, oxygen

and sulphur,

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- "heterocycloalkenyl" is taken to mean any non-aromatic mono- or poly-cyclic group

containing one or more unsaturations, containing from 5 to 10 atoms and which may

contain from 1 to 3 hetero atoms selected from nitrogen, oxygen and sulphur,

- the term "substituted" used in respect of the expressions "alkyl", "alkenyl" and "alkynyl"

indicates that such groups are substituted by one or more radicals, which may be the

same or different, selected from hydroxy, linear or branched (C₁-C₆)alkoxy, linear or

branched (C₁-C₆)alkyl, linear or branched (C₁-C₆)polyhaloalkyl, amino and halogen,

- the term "substituted" used in respect of the expressions "cycloalkyl", "cycloalkylalkyl",

"cycloalkenyl", "cycloalkenylalkyl", "heterocycloalkyl", "heterocycloalkenyl", "hetero-

cycloalkylalkyl" and "heterocycloalkenylalkyl" indicates that the cyclic moiety of such

groups is substituted by one or more radicals, which may be the same or different,

selected from hydroxy, linear or branched (C₁-C₆)alkoxy, linear or branched

 (C_1-C_6) alkyl, linear or branched (C_1-C_6) polyhaloalkyl, amino and halogen,

- "aryl" is taken to mean any aromatic, mono- or poly-cyclic group containing from 6 to

22 carbon atoms, and also the biphenyl group,

- "heteroaryl" is taken to mean any aromatic mono- or poly-cyclic group containing from

5 to 10 atoms containing from 1 to 3 hetero atoms selected from nitrogen, oxygen and

sulphur,

it being possible for the "aryl" and "heteroaryl" groups to be substituted by one or more

radicals, which may be the same or different, selected from hydroxy, linear or branched

(C₁-C₆)alkoxy, linear or branched (C₁-C₆)alkyl, linear or branched (C₁-C₆)polyhaloalkyl,

cyano, nitro, amino and halogen,

it being understood that:

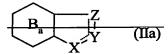
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- when A represents a ring system of formula (IIa):



wherein X, Y, Z and the symbol are as defined hereinbefore, B_a represents a benzene nucleus and R represents a group of formula (V), then R' cannot represent G-R² wherein G represents a single bond (t=0) and R² represents CONR'_aR"_a wherein R'_a and R"_a are as defined hereinbefore,

- when A represents a naphthalene nucleus and R represents a group of formula (V), then
 R' cannot represent G-R² wherein G represents a single bond (t=0) and R² represents
 NHCOR_b wherein R_b represents a group (C₁-C₄)alkyl or phenol optionally substituted,
- when A represents 1-naphthol and R represents a group of formula (V), then R' cannot represent G-R² wherein G represents a single bond (t=0) and R² represents -CONHR_c wherein R_c represents optionally substituted phenyl,
- when A represents a tetrahydronaphthalene nucleus and R represents a group of formula (V), then R' cannot represent G-R² wherein G represents a single bond (t=0) and R² represents -NR_aCOR_d wherein R_d represents (C₃-C₈)cycloalkyl,
- when A represents an indole nucleus substituted in the 2 position by optionally substituted phenyl, then R² cannot represent NHCOR_e wherein R_e is a group containing an aromatic or non-aromatic mono- or bi-cyclic heterocycle,
- the compound of formula (I) cannot represent :
 - * N-{2-[4-methylthio]-1H-3-indolyl]ethyl} formamide
 - * 2 (acetylamino) 3 {7 [(2-hydroxyethyl)thio]-IH-3 indolyl) propanamide
 - * 2 (acetylamino)-3-{2,7-di[(2-hydroxyethyl)thio]-1H-3-indolyl} propanamide,

its enantiomers and diastereoisomers, and addition salts thereof with a pharmaceutically acceptable acid or base.

2. (canceled)

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3. (previously presented) A compound of claim 1, wherein A represents a ring system of formula (III'):

wherein B', X', T' and the symbol are as defined in claim 1.

- 4. (canceled)
- 5. (previously presented) A compound of claim 1, wherein A represents a ring system of formula (III') substituted in the 7-position by R as defined in claim 1 and in the 1- or 2-position by R' as defined in claim 1.
 - 6. (previously presented) A compound of claim 1, wherein R represents a group of formula (V).
 - 7. (previously presented) A compound of claim 1, wherein R represents a group of formula (VI).
- 8. (previously presented) A compound of claim 1, wherein R represents NR'_aR"_a wherein R'_a and R"_a are as defined in claim 1.
 - 9. (previously presented) A compound of claim 1, wherein R represents a group of formula (V) wherein r is 0 and R¹ represents R_a as defined in claim 1.

- 10. (previously presented) A compound of claim 1, wherein R represents NR'aR"a wherein R'a and R"a are as defined in claim 1.
- 11. (previously presented) A compound of claim 1, wherein R represents a group of formula (VI) wherein E represents $-S \text{ or } -N \text{ wherein r and } R_a$ are as defined (O), R_a
- 5 in claim 1.
 - 12. (previously presented) A compound of claim 1, wherein R' represents G-R² wherein G represents an unsubstituted or substituted alkylene chain -(CH₂)_t-, wherein t is 2 or 3, and

$$R^2$$
 represents $-N-C-R'_a$, $-N-C-NR'_aR''_a$ or $-C-NR'_aR''_a$ wherein R_a , R'_a , Q Q Q Q

- 13. (currently amended) A compound of claim 1, wherein R' represents G-R² wherein G represents an alkylene chain -(CH₂)_t-, wherein t is 2 or 3, and R² represents _-NHCOR'_a or -CONHR'_a wherein R'_a is as defined in claim 1.
 - 14. (canceled)
 - 15. (canceled)
- 15 **16.** (canceled)
 - 17. (previously presented) A compound of claim 1, wherein A represents a ring system of formula (III') and R represents a group of formula (V).
 - 18. (previously presented) A compound of claim 1, wherein A represents a ring system of formula (III') and R represents -NR'aR"a.

		formula (III') and R represents a group of formula (VI).
	20.	(canceled)
	21.	(canceled)
5	22.	(canceled)
	23.	(previously presented) A compound of claim 1, wherein A represents a ring system of formula (III') substituted in the 7-position by a group of formula (V) and in the 1- or 2-position by a group of formula (VII).
10	24.	(currently amended) A compound of claim 1, wherein A represents a ring system of formula (III') substituted in the 7-position byNR'aR"a and in the 1- or 2-position by a group of formula (VII).
	25.	(previously presented) A compound of claim 1, wherein A represents a ring system of formula (III') substituted in the 7-8-position by a group of formula (VI) and in the 1- or 2-position by a group of formula (VII).
15	26.	(canceled)
	27.	(canceled)
20	28.	(canceled)
	29.	(canceled)

19. (previously presented) A compound of claim 1, wherein A represents a ring system of

30. (previously presented) A compound of claim 1, wherein A represents a ring system of formula (III'), which is substituted in the 7-position by a group of formula

S-R_a
(O).

wherein r and Ra are as defined in claim 1

and substituted in the 1- or 2-position by a group of formula (VII) wherein G represents an unsubstituted or substituted chain $-(CH_2)_{t-}$, wherein t is 2 or 3, and R^2 represents

$$R_a$$
 R_a R_a $N-C-R'_a$, $N-C-NR'_aR''_a$ or $C-NR'_aR''_a$ wherein Q, R_a , R'_a and R''_a Q Q

are as defined in claim 1.

31. (previously presented) A compound of claim 1, wherein A represents a ring system of formula (III'), which is substituted in the 7-position by a group of formula -NR'aR"a wherein R'a and R"a are as defined in claim 1

and substituted in the 1- or 2-position by a group of formula (VII) wherein G represents an unsubstituted or substituted chain $-(CH_2)_{t}$, wherein t is 2 or 3, and R^2 represents

are as defined in claim 1.

32. (previously presented) A compound of claim 1, wherein A represents a ring system of formula (III'), which is substituted in the 7-8-position by a group of formula (VII) wherein E represents —S— wherein r is as defined in claim 1

(O)_r

and substituted in the 1- or 2-position by a group of formula (VII) wherein G represents an unsubstituted or substituted chain $-(CH_2)_{t-}$, wherein t is 2 or 3, and R^2 represents

are as defined in claim 1.

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33. (previously presented) A compound of claim 1, wherein A represents a ring system of formula (III') substituted in the 7-8-position by a group of formula (VI) wherein E represents -N— wherein R_a is as defined in claim 1, R_a

and which is substituted in the 1- or 2-position by a group of formula (VII) wherein G represents an unsubstituted or substituted chain $-(CH_2)_{t-}$, wherein t is 2 or 3, and R^2 represents

are as defined in claim 1.

- 34. (previously presented) A compound of claim 1, wherein A represents naphthalene, dihydro-or tetrahydro-naphthalene, which is optionally substituted (in addition to the substituents R and R'), preferably in the 3-position.
- 35. (canceled)

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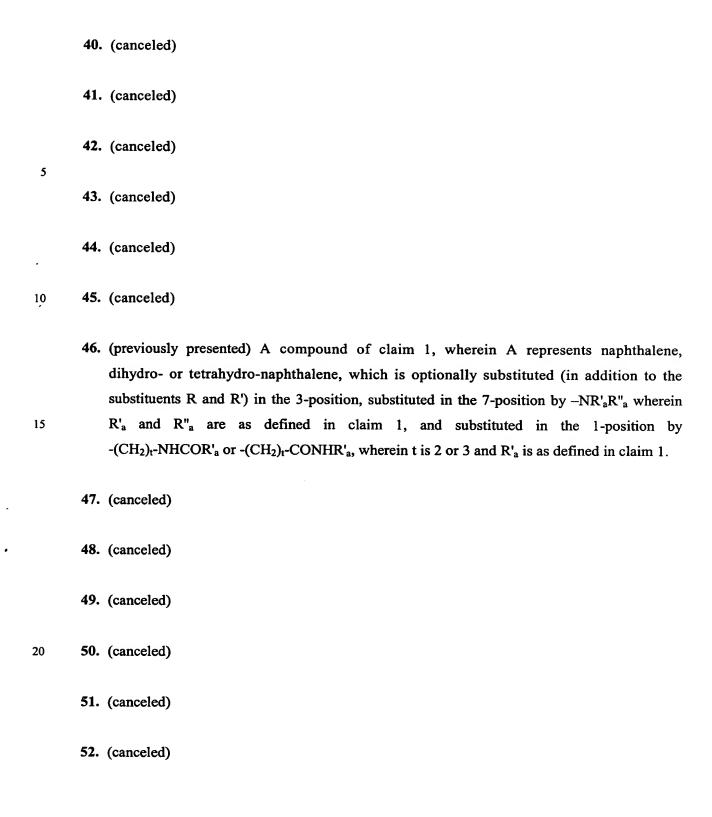
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- 36. (canceled)
- 37. (canceled)
- 38. (canceled)
- 39. (previously presented) A compound of claim 1, wherein A represents naphthalene, dihydro- or tetrahydro-naphthalene, which is optionally substituted (in addition to the substituents R and R') in the 3-position, substituted in the 7-position by

 -S-R_a wherein r and R_a are as defined in claim 1, and substituted in the 1-position by

 (O).

-(CH₂)_t-NHCOR'_a or -(CH₂)_t-CONHR'_a, wherein t is 2 or 3 and R'_a is as defined in claim 1.



53. (previously presented) A compound of claim 1, wherein A represents naphthalene, which is optionally substituted (in addition to the substituents R and R') in the 3-position, substituted in the 7-position by -SAlk wherein Alk represents substituted or unsubstituted linear or branched (C₁-C₆)alkyl, and substituted in the 1-position by -(CH₂)_t-NHCOR'_a, -(CH₂)_t-CONHR'_a or -(CH₂)_t-NH-CO-NR'_aR"_a, wherein t is 2 or 3 and R'_a and R"_a are as defined in claim 1.

- **54.** (previously presented) A compound of claim 1 that is N-{2-[7-(methylthio)-1-naphthyl]-ethyl}acetamide.
- . 55. (previously presented) A compound of claim 1 that is N-{2-[7-(methylthio)-1-naphthyl]thyl}butanamide.
 - 56. (previously presented) A compound of claim 1 that is N-{2-[7-methylthio)-1-naphthyl]-ethyl}-1-cyclopropanecarboxamide.
 - 57. (previously presented) A compound of claim 1 that is N-{2-[7-(methylthio)-1-naphthyl]-ethyl}-2,2,2-trifluoroacetamide.
- 58. (previously presented) A compound of claim 1 that is N-methyl-N'-{2-[7-(methylthio)-1-naphthyl]ethyl}urea.
 - 59. (previously presented) A compound of claim 1 that is N-{2-[3-benzoyl-7-(methylthio)-1-naphthyl]ethyl}acetamide.
- 60. (previously presented) A compound of claim 1 that is N-{2-[3-benzyl-7-(methylthio)-1-naphthyl]ethyl}acetamide.
 - 61. (previously presented) A compound of claim 1 that is N-{2-[7-(ethylthio)-1-naphthyl]ethyl}acetamide.

- **62.** (previously presented) A compound of claim 1 that is N-{2-[7-(propylthio)-1-naphthyl]ethyl}acetamide.
- 63. (previously presented) A compound of claim 1 that is N-{2-[7-(methylsulphinyl)-1-naphthyl]ethyl}acetamide.
- 64. (previously presented) A compound of claim 1 that is N-{2-[7-(methylsulphonyl)-1-naphthyl]ethyl}acetamide.
 - 65. (previously presented) A compound of claim 1 that is N-{2-[7-(methylthio)-1,2,3,4-tetrahydro-1-naphthyl]ethyl}acetamide.
- 66. (previously presented) A compound of claim 1 that is N-{2-[7-(methylsulphinyl)-1,2,3,4-tetrahydro-1-naphthyl]ethyl}acetamide.
 - 67. (previously presented) A compound of claim 1 that is N-{2-[7-(methylsulphonyl)-1,2,3,4,-tetrahydro-1-naphthyl]ethyl}acetamide.
 - 68. (previously presented) A compound of claim 1 that is N-{2-[7-(benzylthio)-1-naphthyl]ethyl}acetamide.
- 69. (previously presented) A compound of claim 1 that is N-{2-[7-(benzylsulphinyl)-1-naphthyl]ethyl}acetamide.
 - 70. (previously presented) A compound of claim 1 that is N-{2-[7-(benzylsulphonyl)-1-naphthyl]ethyl}acetamide.
 - 71. (currently amended) A compound of claim 1 selected from:
 - * N-[2-(7-mercapto-1-naphthyl)ethyl]benzamide and

- * N-[2-(3-benzyl-7-mercapto-1-naphthyl)ethyl]-1-cyclohexanecarboxamide
- * N-[2-(5-mercaptobenzo[b]furan-3-yl)ethyl]acetamide, and

72. (currently amended) A compound of claim 1 selected from: * N-{2-[7-(allylthio)-1-naphthyl]ethyl}-2-phenylacetamide, * N-{2-[7-(benzylthio)-1-naphthyl]ethyl}heptanamide, 5 * N-methyl-2-[7-(cyclopentylthio)-1-naphthyl]acetamide, * N-cyclohexyl-4-[7-(phenylthio)-1-naphthyl]butanamide, * N-{2-[7-(allylthio)-3-phenyl-1-naphthyl]ethyl}acetamide, * N-{2-[7-(benzylthio)-3-phenyl-1-naphthyl]ethyl}acetamide, and * N-{3-[7-(1-propenylthio)-1,2,3,4-tetrahydro-1-naphthyl]propyl}acetamide. 73. (canceled) 10 74. (canceled) 75. (canceled) 76. (canceled) 77. (canceled) 15 78. (currently amended) A compound of claim 1 selected from: * N-{2-[7-amino-3-(cyclopropylmethyl)-1-naphthyl]ethyl}acetamide, * N-{2-[7-(diethylamino)-1-naphthyl]ethyl}-2-phenylacetamide, and * N-{2-[7-(hexylamino)-1,2,3,4-tetrahydro-1-naphthyl]ethyl}acetamide_, and *-N-[(6-morpholino-2-phenyl-2H-3-chromenyl)methyl]acetamide. 79. (canceled) 20 80. (canceled) Serial No. 09/700,098

* N-[2-(2-benzyl 5 mercaptobenzo[b]furan-3-yl)ethyl] 1 cyclopropanecarboxamide.

81. (currently amended) A compound of formula (XX_A) according to claim 74, a particular case of the compounds of formula (XX):

$$Hal - A_A - R'_A$$
 (XX_A)

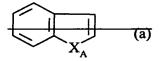
wherein:

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- 5 ♦ Hal represents halogen (fluorine, chlorine, bromine, iodine),
 - ♦ A_A represents :

-a ring system of formula (a):



wherein X_A represents sulphur or $C(H)_q$ (wherein q is 0, 1 or 2) or NR_0 (wherein R_0 is as defined hereinbefore), and the symbol is as defined hereinbefore,

wherein the halogen atom substitutes the benzene nucleus and R'_A-substitutes the 5-membered ring,

- or a ring system of formula (b):

$$X_A$$
 (b)

wherein Y_A and Z_A , which may be the same or different, represent oxygen or sulphur or $C(H)_q$ (wherein q is 0, 1 or 2), and the symbol is as defined hereinbefore,

wherein the halogen atom substitutes the benzene nucleus and R'A substitutes one or the other of the two rings,

which ring system[[s]] of formula (a) or (b) may be substituted (in addition to the halogen atom and the group R'_A) by one or more groups selected from R_a , COR_a , $COOR_a$, $OCOR_a$ wherein R_a is as defined hereinbefore,

♦ and R'A represents G-R²A wherein G is as defined hereinbefore and R²A represents

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$$R_a$$
 R_a R_a R_a R_a R_a R_a R_a R_a or R_a or R_a R_a wherein R_a , R_a , R_a , R_a and R_a are as defined hereinbefore, R_a R_a , R_a

as synthesis intermediates but also as compounds for use in the treatment of disorders associated with the melatoninergic system.

- 82. (currently amended) A method for treating a living animal body afflicted with disorders of the melatoninergic system comprising the step of administering to the living animal body an amount of a compound of claim 1 which is effective for the alleviation for of said disorder.
- 83. (previously presented) A pharmaceutical composition useful for treating melatoninergic disorders comprising, as active principle an effective amount of a compound as claimed in claim 1, together with one or more pharmaceutically-acceptable excipients or vehicles.